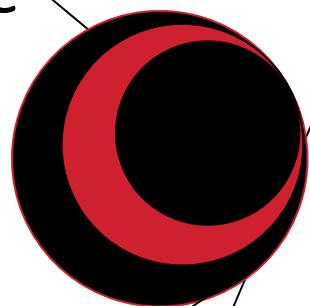


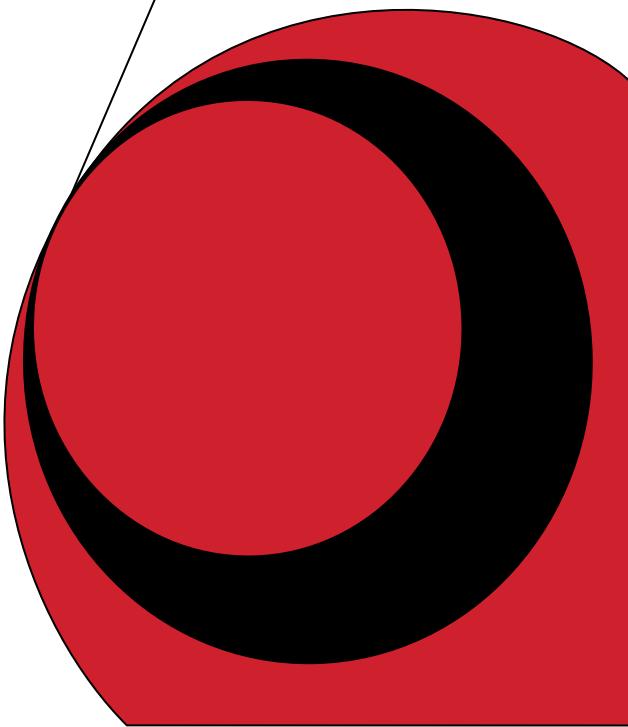
October 2021
Missouri Commercial Motor Vehicle
Safety Belt Survey
Final Report



Submitted to: Missouri Department of Transportation
Highway Safety and Traffic Division

Submitted by: LaGena Spence, Missouri Safety Center
University of Central Missouri

Submitted: December 2021



EXECUTIVE SUMMARY

In November of 2003, the Federal Motor Carrier Safety Administration released a national study, "Safety Belt Usage by Commercial Motor Vehicle Drivers." A total of 3,909 observations were conducted in 12 states which resulted in an overall commercial vehicle safety belt use of 48 percent. Missouri was selected as one of the sample states for this survey. Surveys were conducted at seven locations in Missouri (Boone, Callaway, Cole, Cooper, Johnson, Lafayette, and Saline counties) which resulted in 329 truck observations. Based upon this limited sample, Missouri's 2003 commercial vehicle safety belt usage rate was 50.0 percent.

In 2004, the Missouri Safety Center was requested by the Highway Safety and Traffic Division of the Missouri Department of Transportation (MoDOT), to conduct a Commercial Motor Vehicle (CMV) Safety Belt Observational Survey. The 2004 safety belt use survey was done as the base line; then each survey after and up through the 2021 safety belt use survey was conducted as a replication of the former. The survey was conducted at 250 locations in 76 Missouri counties. The survey sites were located throughout the nine Missouri State Highway Patrol (MSHP) Troop areas.

The Highway Safety and Traffic Division of Missouri Department of Transportation (MoDOT) contracted with the Missouri Safety Center located at the University of Central Missouri to implement and analyze the 2021 observational survey with the statistical expertise being provided by Judi D. Reine, MA, Director of Institutional Research at State Fair Community College.

The following report documents the 2021 results of Missouri's CMV safety belt use survey. Driver shoulder belt usage in Class 7 (six to nine tires) and Class 8 (10 or more tires) was observed at each selected site. Observations were collected over a two-week period (October 11 - 24, 2021) and each observation was 40 minutes in length

Two instruments were used to collect these data: Site Summary Form and a Vehicle/Driver Form (*See Appendix A*). The Site Summary Form identified the MSHP Troop, county, site number, roadway type, day of week, direction of traffic flow, road condition, and time of day. Data elements on the Vehicle/Driver Form included Vehicle Type 7 – Straight Frame (van, tanker, dump truck, flat bed, bus and other, i.e., fire truck), Vehicle Type 8- Combination Vehicle (box trailer, single tanker, double trailer, flat trailer, car hauler, bobtail, dump and other i.e., large cement truck), drivers restraint status, and if the vehicle was displaying a hazard placard.

Based upon a total of 21,071 commercial motor vehicle drivers observed, the 2021 safety belt use rate on Missouri roadways was found to be 87.69% (rounding to 87.7%). Of these 21,071 occupants, safety belt use could not be determined for 135 drivers, (the observer was unable to positively see if a safety belt was being used).

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METHODOLOGY

In 2004, the Missouri Safety Center was requested by the Highway Safety Division of the Missouri Department of Transportation to conduct a Commercial Vehicle Safety Belt Observational Survey. In preparation for the survey, meetings were held to outline the survey parameters, guiding principles, and sampling procedures.

Five guiding principles identified through these collaborative meetings served as the underlying basis for the sampling plan used in this study.

- The individual observation site would be the basic sample unit at which safety belt usage observations would be made.
- The safety belt usage rates of commercial vehicle drivers would be computed for each of the nine Missouri State Highway Patrol (MSHP) Troops.
- The number of sites selected from each of the Missouri State Highway Patrol Troops would be in proportion to the commercial motor vehicle (CMV) daily vehicle miles of travel (DVMT) that troop has in comparison to the state total of 18,100,711 CMV DVMT.
- The location for each site in the nine MSHP Troops would be selected in proportion to the number of CMV DVMT for each of four roadway types; Freeway, Expressway, Two-lane and Other (Super 2 Lane, 5-Lane Section, 3-Lane Section, Multi-Lane, and One Way) that each troop has in comparison to the state total CMV DVMT of Freeway (10,216,308), Expressway (2,795,514), Two-lane (3,493,485) and Other (159,703).
- The sites within each Troop would be selected in their descending order of CMV DVMT by roadway type to maximize the number of commercial vehicle drivers from each MSHP Troop. The number of observation sites within the nine MSHP Troops are shown on a Missouri map located in *Appendix B*.

Detailed survey method tables are located in *Appendix C*.

The 2004 safety belt use survey was done as the base line; then each survey after and up through the 2021 safety belt use survey was conducted as a replication of the former.

KEY FINDINGS

The observations were held Monday, October 11 through Sunday, October 24, 2021. One hundred percent of the surveyors were experienced and had previously participated in safety belt observational surveys. The majority of the observations, 82.4%, were conducted in dry weather. Thirty percent of the observations were of the east direction of traffic flow, 27.0% from the west, with 21.0% and 22.0% from the north and south respectively. The observation period is 40 minutes in length with the percentage of observations by time being: 8:00 am (10.4%), 9:00 am (14.6%), 10:00 am (18.2%), 11:00 am (13.1%), 12:00 noon (7.3%), 1:00 pm (16.8%), 2:00 pm (14.0%), and 3:00 pm (5.6%).

Results from Missouri's initial CMV safety belt survey to the most current are included in Figure 1. From 2004 to 2021 the CMV usage rate has increased by 28.9%.

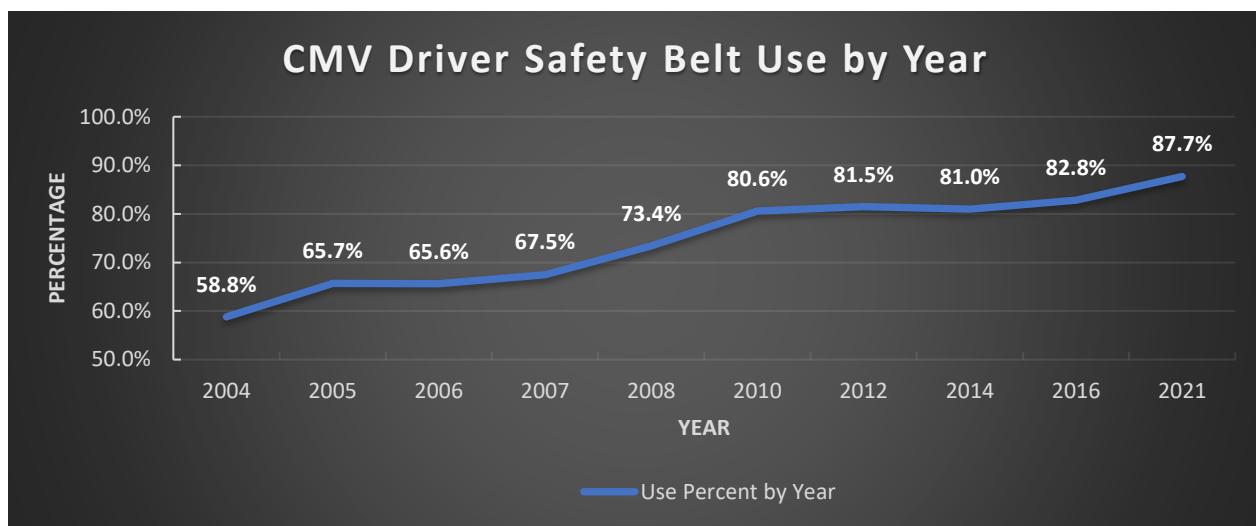


Figure 1: CMV Driver Safety Belt Use by Year

There were two identification/classifications of vehicles observed: Class 7 (six to nine tires) and Class 8 (10 or more tires). Of the vehicles observed, Class 8 had the highest frequency observed with 83.1 percent. The number of total observations and the percent of the total sample by Vehicle Class are presented in Table 1.

Table 1
Frequency and Percent of Observations
by Vehicle Class

Vehicle Class	Freq.	Percent
Class 7	3,554	16.9%
Class 8	17,517	83.1%

Displayed in Table 2 and Figure 2 is the safety belt use of all drivers by Vehicle Class. Class 8 showed the highest driver safety belt usage at 88.6 percent, while Class 7 was observed at 83.3 percent.

Table 2
Driver Safety Belt Use
by Vehicle Class

Vehicle Class	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Class 7	2,962	83.3	553	15.6	39	1.1
Class 8	15,516	88.6	1,905	10.9	96	0.5
TOTAL	18,478	87.7	2,458	11.7	135	0.6

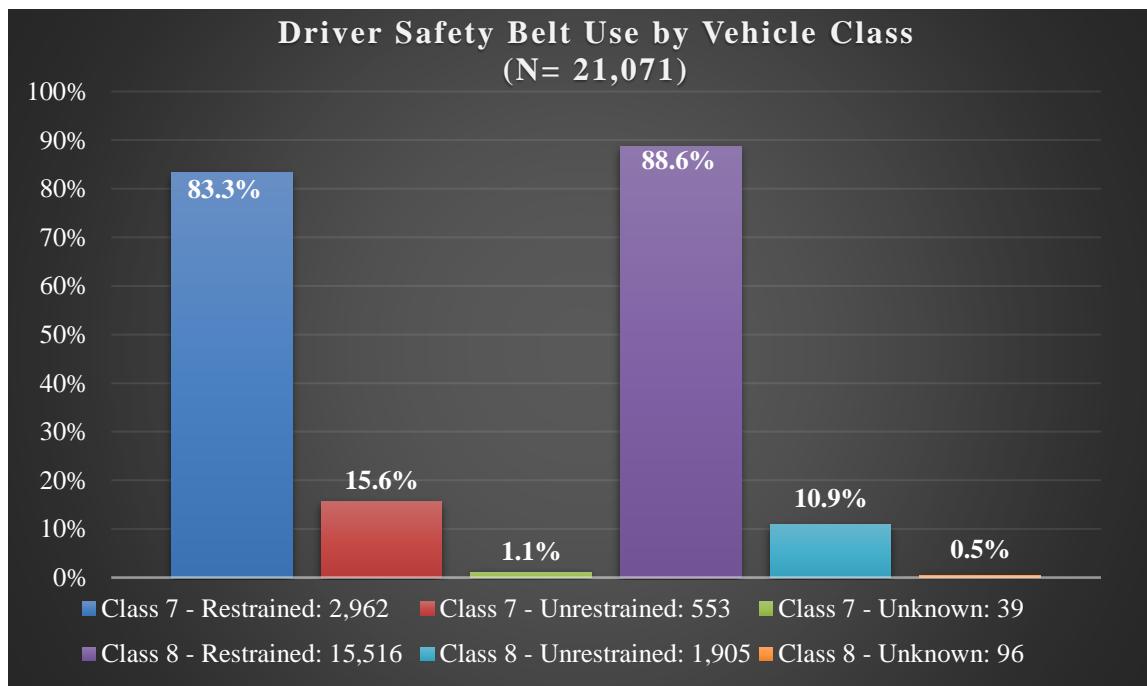


Figure 2: Driver Safety Belt Use by Vehicle Class

Table 3 reflects the frequency and percent of observations by class/type of vehicle. Of the vehicle types observed, 12,470 (59.2%) were Class 8 – Box Trailers whereas Class 8 – Other had the least observed at 81 (0.4 %).

Table 3
Frequency and Percent of Observations
by Vehicle Class/Type

Vehicle Class/Type	Freq.	Percent
Class 7 – Van	1,610	7.6
Class 7 – Tanker	139	0.7
Class 7 – Dump	338	1.6
Class 7 – Flat Bed	596	2.8
Class 7 – Bus	419	2.0
Class 7 – Other	452	2.2
Class 8 – Box Trailer	12,470	59.2
Class 8 – Single Tanker	1,081	5.1
Class 8 – Double Trailer	638	3.0
Class 8 – Flat Trailer	2,006	9.5
Class 8 – Car Hauler	197	0.9
Class 8 – Bobtail	335	1.6
Class 8 – Dump	709	3.4
Class 8 – Other	81	0.4

Table 4 depicts the driver safety belt use by vehicle class/type. Class 8 – Double Trailer had the highest belt use at 92.5 percent. Class 8 – Dump had the lowest at 78.3 percent.

Table 4
Driver Safety Belt Use
by Vehicle Class/Type

Vehicle Class/Type	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Class 7 – Van	1,352	84.0	238	14.8	20	1.2
Class 7 – Tanker	125	89.9	13	9.4	1	0.7
Class 7 – Dump	276	81.7	57	16.9	5	1.4
Class 7 – Flat Bed	484	81.2	109	18.3	3	0.5
Class 7 – Bus	354	84.5	58	13.9	7	1.6
Class 7 – Other	371	82.1	78	17.3	3	0.6
Class 8 – Box Trailer	11,114	89.1	1,295	10.3	61	0.5
Class 8 – Single Tanker	950	87.9	120	11.1	11	1.0
Class 8 – Double Trailer	590	92.5	47	7.4	1	0.1
Class 8 – Flat Trailer	1,780	88.7	217	10.8	9	0.5
Class 8 – Car Hauler	174	88.3	22	11.2	1	0.5
Class 8 – Bobtail	283	84.5	50	14.9	2	0.6
Class 8 – Dump	555	78.3	143	20.2	11	1.5
Class 8 – Other	70	86.4	11	13.6	0	0
TOTAL	18,478	87.7	2,458	11.7	135	0.6

An additional data element collected during the survey was that of a Hazard Placard being displayed. Table 5 provides the frequency and percent of commercial motor vehicles observed with Hazard Placards.

Table 5
Frequency and Percent of Observations
with Hazard Placard

Hazard Placard	Freq.	Percent
Yes	575	2.7%

Figure 3 shows the breakdown of safety belt usage by driver when a hazard placard was observed on display. Of the 575 vehicles observed with hazard placards, 516 (89.7%) of those drivers were belted.

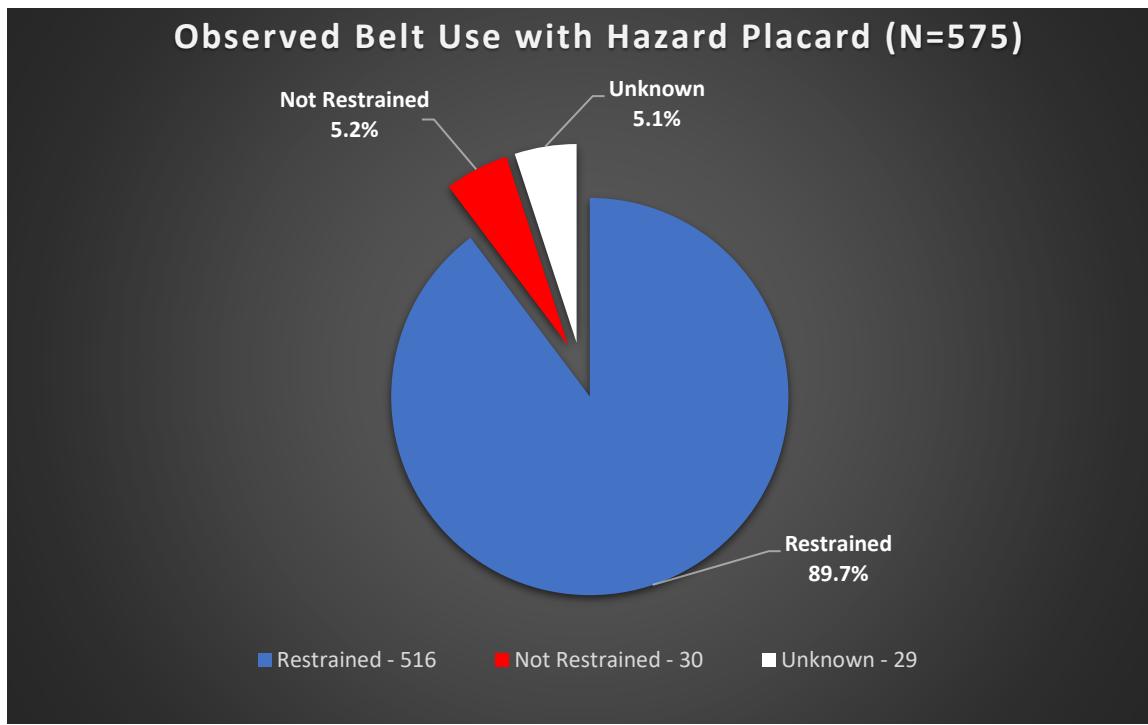


Figure 3: Observed Belt Use with Hazard Placard

Table 6 shows the number of CMV's observed and percent of the total sample, within each of the Missouri State Highway Patrol Troop areas.

Table 6
Frequency and Percent of Observations
by MHSP Troop

MSHP TROOP	Freq.	Percent
Troop A	2,969	14.1
Troop B	309	1.5
Troop C	7,357	34.9
Troop D	2,657	12.6
Troop E	1,981	9.4
Troop F	2,028	9.6
Troop G	135	0.7
Troop H	1,458	6.9
Troop I	2,177	10.3

The commercial vehicle driver safety belt use by MSHP Troop is depicted in Table 7. MSHP Troops F and I had the highest safety belt use rates at 90.3 and 93.8 percent, respectively. The lowest safety belt use rates were in Troops A and B with 78.7 and 77.7 percent, respectively.

Table 7
Driver Safety Belt Use
by MSHP Troop

MSHP TROOP	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop A	2,335	78.7	604	20.3	30	1.0
Troop B	240	77.7	67	21.7	2	0.6
Troop C	6,567	89.3	772	10.5	18	0.2
Troop D	2,384	89.7	237	8.9	36	1.4
Troop E	1,698	85.7	274	13.8	9	0.5
Troop F	1,831	90.3	183	9.0	14	0.7
Troop G	113	83.7	17	12.6	5	3.7
Troop H	1,269	87.0	181	12.4	8	0.6
Troop I	2,041	93.8	123	5.6	13	0.6
TOTAL	18,478	87.7	2,458	11.7	135	0.6

Table 8 depicts CMV driver safety belt use for each Troop from 2004 through 2021.

Table 8
CMV Driver Safety Belt Use
by MSHP Troop and Year

(2004 – 2021)
(Data for Restrained Driver Only)

Troop Freq. Percent	Freq. 2004	Freq. 2005	Freq. 2006	Freq. 2007	Freq. 2008	Freq. 2010	Freq. 2012	Freq. 2014	Freq. 2016	Freq. 2021
Troop A	1,707 56.0%	1,583 60.4%	1,976 66.8%	2,464 62.9%	2,275 72.0%	3,135 79.0%	3,385 86.7%	3,195 84.1%	2,109 69.6%	2,335 78.7%
Troop B	132 59.7%	132 60.3%	105 68.6%	146 78.1%	147 73.5%	199 80.6%	196 75.4%	160 68.1%	201 70.8%	240 77.7%
Troop C	2,215 52.1%	2,599 67.3%	3,300 63.8%	6,066 68.8%	6,848 74.8%	5,332 84.4%	3,953 80.3%	5,270 83.5%	4,293 82.8%	6,567 89.3%
Troop D	1,266 72.0%	1,309 72.9%	1,437 72.7%	1,364 76.8%	1,404 77.0%	1,473 82.8%	1,792 83.2%	1,562 72.9%	1,837 84.3%	2,384 89.7%
Troop E	773 49.2%	775 51.4%	854 57.9%	934 59.5%	1,051 68.3%	1,092 72.0%	1,145 74.5%	1,260 79.2%	1,304 83.2%	1,698 85.7%
Troop F	1,459 72.1%	1,061 74.6%	961 75.3%	1,276 72.1%	1,373 70.3%	1,529 77.0%	1,623 90.9%	1,544 86.8%	1,774 90.1%	1,831 90.3%
Troop G	78 60.5%	123 74.6%	161 62.2%	257 71.0%	303 79.5%	145 79.8%	141 62.7%	108 70.6%	122 70.9%	113 83.7%
Troop H	656 59.4%	613 56.9%	804 64.0%	745 62.2%	608 61.4%	720 63.8%	849 74.0%	962 74.1%	1,143 85.2%	1,269 87.0%
Troop I	794 59.6%	1,035 75.6%	888 61.1%	1,350 66.5%	1,656 77.8%	1,589 90.9%	1,164 74.2%	1,152 78.5%	1,785 96.0%	2,041 93.8%
Total	9,080 58.8%	9,230 65.7%	10,486 65.6%	14,602 67.5%	16,165 73.4%	15,214 80.6%	14,548 81.5%	15,213 81.0%	14,568 82.8%	18,478 87.7%

The commercial motor vehicle driver safety belt use rate by MSHP Troop and county is reflected in Table 9. In Troop A the safety belt usage rate ranged from 87.3 to 58.3 percent by county, Troop B from 92.6 to 58.0 percent, Troop C from 95.0 to 80.0 percent, Troop D from 96.8 to 50.0 percent, Troop E from 91.2 to 80.0 percent, Troop F from 95.9 to 50.0 percent, Troop G from 89.6 to 57.1 percent, Troop H from 100.0 to 50.0 percent, and Troop I from 94.9 to 92.6 percent.

Table 9
Commercial Vehicle Driver Safety Belt Use
by MSHP Troop by County

County	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop A						
Bates	101	73.2	36	26.1	1	0.7
Cass	187	84.6	34	15.4	0	0
Clay	488	87.3	69	12.3	2	0.4
Henry	7	58.3	3	25.0	2	16.7
Jackson	701	72.3	254	26.2	15	1.5
Johnson	2	66.7	1	33.3	0	0
Lafayette	246	76.4	72	22.4	4	1.2
Pettis	4	80.0	1	20.0	0	0
Platte	297	85.3	50	14.4	1	0.3
Ray	17	77.3	4	18.2	1	4.5
Saline	285	77.2	80	21.7	4	1.1
Troop B						
Linn	51	58.0	36	40.9	1	1.1
Ralls	137	92.6	10	6.8	1	1.6
Randolph	43	68.3	20	31.7	0	0
Schuylerville	9	90.0	1	10.0	0	0
Troop C						
Franklin	1,676	89.5	191	10.2	6	0.3
Jefferson	460	83.0	94	17.0	0	0
Lincoln	156	87.2	22	12.3	1	0.5
Perry	334	87.9	42	11.1	4	1.0
Pike	122	94.6	7	5.4	0	0
St. Charles	567	94.2	35	5.8	0	0
St. Francois	60	80.0	15	20.0	0	0
St. Louis	2,243	87.8	306	12.0	6	0.2
Ste. Genevieve	271	91.6	25	8.4	0	0
Warren	678	95.0	35	4.9	1	0.1

Table 9 (Continued)

County	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop D						
Barry	25	78.1	6	18.8	1	3.1
Barton	48	96.0	2	4.0	0	0
Christian	100	82.6	16	13.2	5	4.1
Dallas	39	69.6	17	30.4	0	0
Greene	478	86.3	65	11.7	11	2.0
Jasper	327	93.4	20	5.7	3	0.9
Lawrence	411	92.6	28	6.3	5	1.1
McDonald	58	95.1	2	3.3	1	1.6
Newton	607	96.8	13	2.1	7	1.1
Polk	97	79.5	24	19.7	1	0.8
St. Clair	5	71.4	2	28.6	0	0
Taney	4	50.0	2	25.0	2	25.0
Vernon	35	94.6	2	5.4	0	0
Webster	150	79.8	38	20.2	0	0

County	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop E						
Bollinger	14	82.4	3	17.6	0	0
Butler	33	86.8	5	13.8	0	0
Cape Girardeau	239	86.3	36	13.0	2	0.7
Dunklin	16	80.0	4	20.0	0	0
Mississippi	237	86.5	36	13.1	1	0.4
New Madrid	452	85.9	73	13.9	1	0.2
Pemiscot	436	85.0	74	14.4	3	0.6
Scott	240	85.1	40	14.2	2	0.7
Stoddard	31	91.2	3	8.8	0	0

County	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop F						
Audrain	21	50.0	18	42.9	3	7.1
Boone	586	90.2	61	9.4	3	0.4
Callaway	587	95.9	25	4.1	0	0
Camden	17	68.0	8	32.0	0	0
Cole	111	91.0	9	7.4	2	1.6
Cooper	266	88.1	32	10.6	4	1.3
Gasconade	11	91.7	1	8.3	0	0
Miller	42	95.5	1	2.3	1	2.2
Moniteau	5	55.6	4	44.4	0	0
Montgomery	163	87.2	24	12.8	0	0
Osage	22	95.7	0	0	1	4.3

Table 9 (Continued)

County	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop G						
Howell	60	89.6	7	10.4	0	0
Oregon	4	57.1	3	42.9	0	0
Texas	49	80.3	7	11.5	5	8.2

County	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop H						
Andrew	17	89.5	2	10.5	0	0
Atchison	136	74.7	46	25.3	0	0
Buchanan	357	89.0	42	10.5	2	0.5
Clinton	294	88.8	33	10.0	4	1.2
Daviess	172	95.0	9	5.0	0	0
DeKalb	1	50.0	1	50.0	0	0
Gentry	2	100.0	0	0	0	0
Harrison	137	89.5	15	9.8	1	0.7
Holt	144	83.2	29	16.8	0	0
Nodaway	9	64.3	4	28.6	1	7.1

County	Belted		Non-Belted		Unknown	
	Freq.	Percent	Freq.	Percent	Freq.	Percent
Troop I						
Crawford	477	92.6	36	7.0	2	0.4
Laclede	591	93.5	37	5.9	4	0.6
Phelps	445	94.9	17	3.6	7	1.5
Pulaski	528	94.1	33	5.9	0	0

Table 10 reflects the frequency of observations by roadway type.

Table 10
Frequency and Percent of Observations
by Roadway Type

Roadway Type	Freq.	Percent
Freeway	18,090	85.9
Expressway	1,904	9.0
Two-Lane	803	3.0
Other	274	1.3

Figure 4 shows the Commercial Motor Vehicle Driver safety belt use by roadway type. The Freeway roadway type had the highest use rate at 88.8 percent, whereas the drivers on the Two-Lane roadways had the lowest at 77.7 percent.

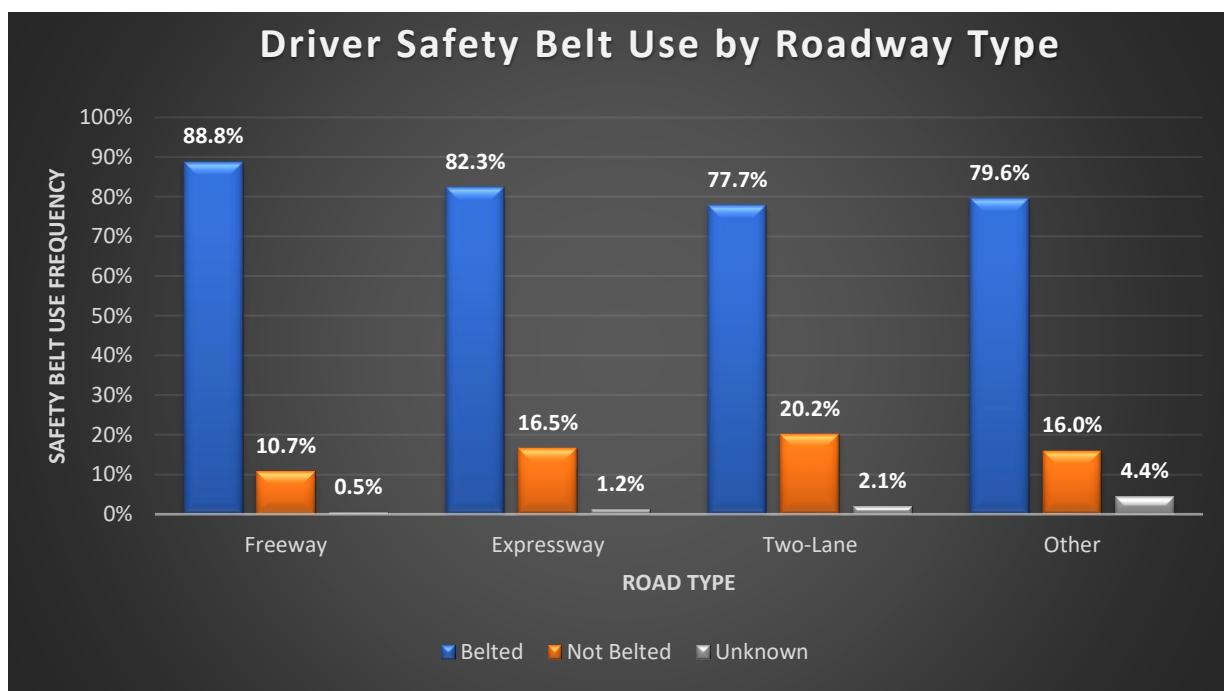
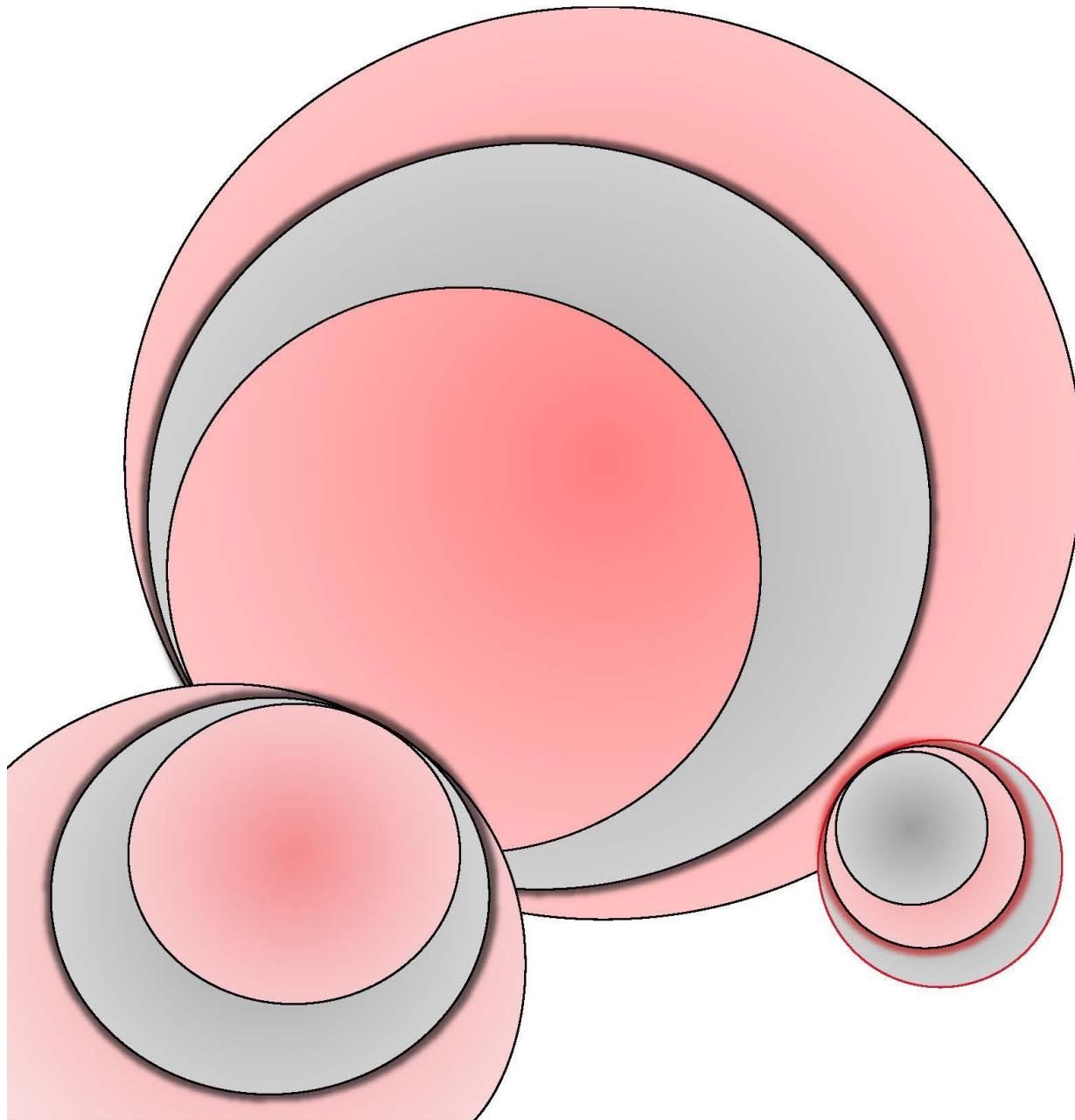


Figure 4: Driver Safety Belt Use by Roadway Type

Appendix A

Survey Instruments

Site Summary Form & Vehicle/Driver Form



Commercial Vehicle Safety Belt Survey

Site Summary Form

Observers: _____

Troop: _____

County: _____

Date: _____

Time: Start _____ End _____

Troop:

County:

Site:

Road Type:

A

O O 0

O O 0

O Freeway

B

O O 1

O O 1

O Expressway

C

O O 2

O O 2

O Two-Lane

D

O O 3

O O 3

O Other: _____

E

O O 4

O O 4

F

O O 5

O O 5

G

O O 6

O O 6

H

O O 7

O O 7

I

O O 8

O O 8

 9

O O 9

O O 9

Day of the Week:

Traffic Flow:

Road Condition:

Monday

North

Dry

Tuesday

South

Wet

Wednesday

East

Fog

Thursday

West

Other: _____

Friday

Saturday

Sunday

Start Time:

8:00

9:00

10:00

11:00

12:00

1:00

2:00

3:00

4:00

5:00

Observation Point (be specific): _____

Major Distraction: _____

Troop:	O	A	County:	O	O	0	Site:	O	O	0	
	O	B		O	O	1		O	O	1	
	O	C		O	O	2		O	O	2	
_____	O	D	_____	O	O	3	_____	O	O	3	
	O	E		O	O	4		O	O	4	
	O	F		O	O	5		O	O	5	
	O	G		O	O	6		O	O	6	
	O	H		O	O	7		O	O	7	
	O	I		O	O	8		O	O	8	
				O	O	9		O	O	9	

Observers: _____

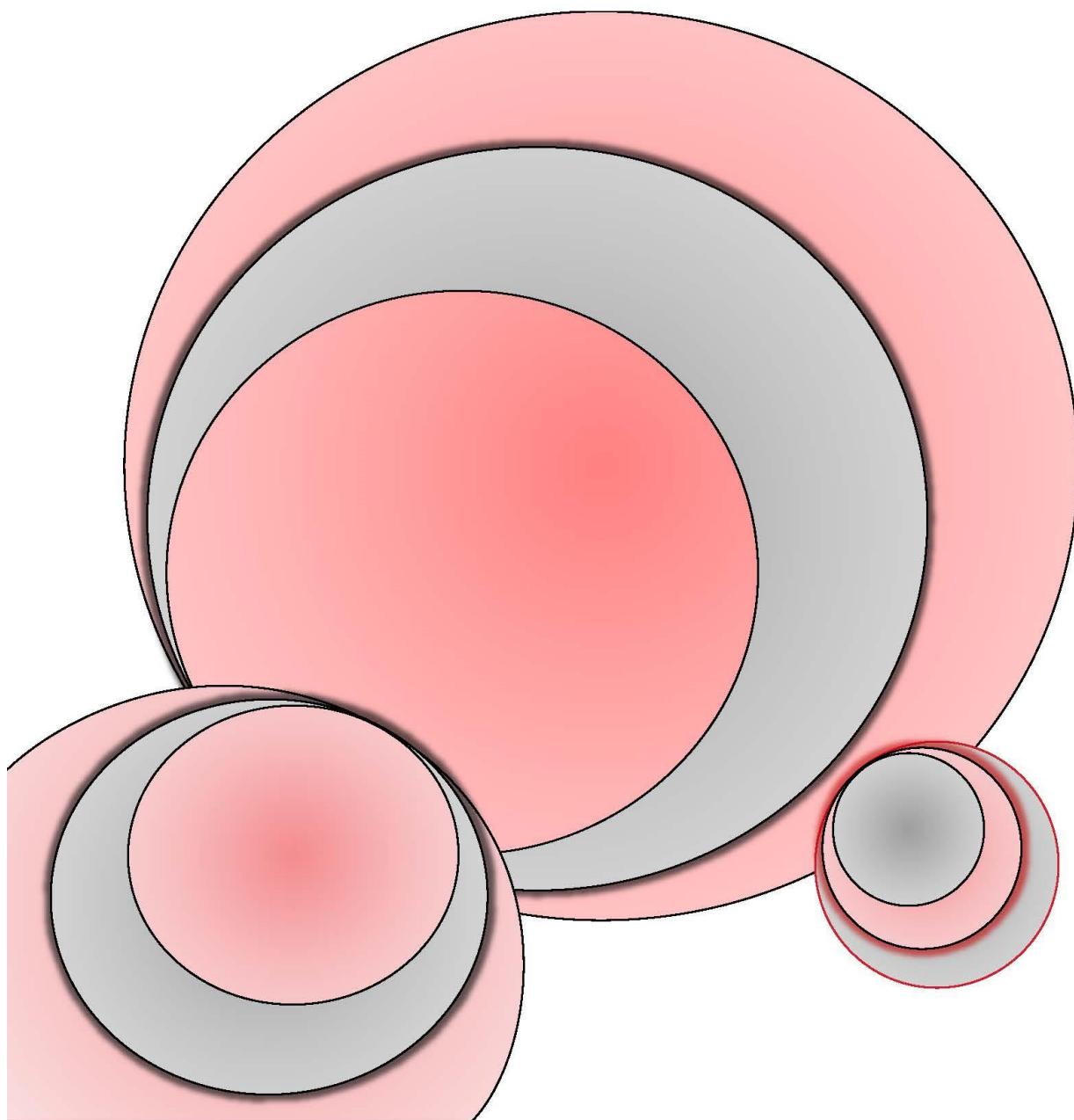
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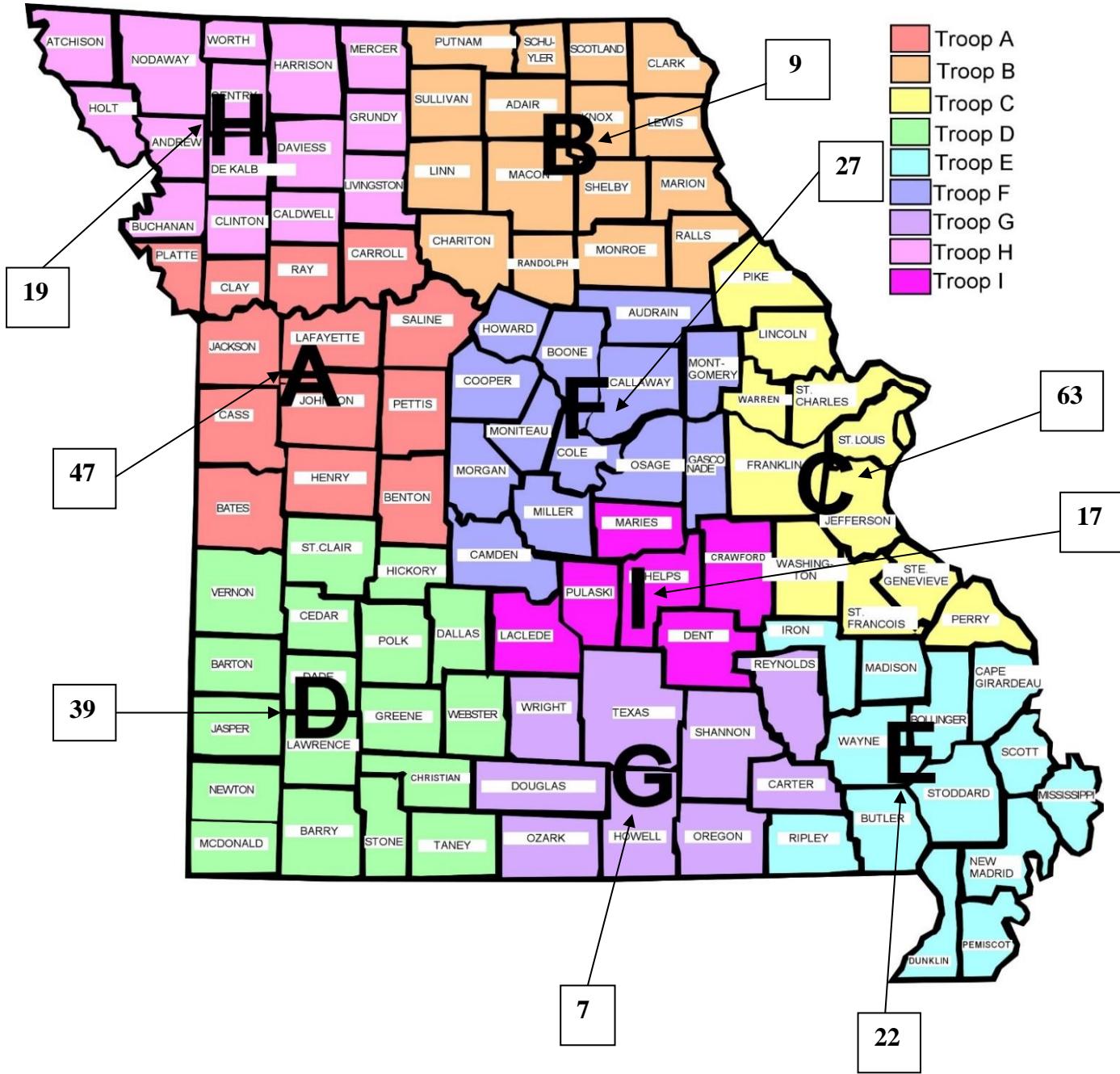
	Vehicle Type 7-Straight Frame						Vehicle Type 8-Combination Vehicle								Belted Yes	Belted No	Hazmat Yes
	Van	Tanker	Dump	Flat Bed	Bus	Other	Box Trailer	Single Tanker	Double Trailor	Flat Trailer	Car Hauler	Bobtail	Dump	Other			
1.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
2.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
3.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
4.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
5.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
6.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
7.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
8.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
9.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
10.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
11.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
12.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
13.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
14.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
15.	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O

Appendix B

Missouri Map

Number of Observation Sites by MSHP Troop

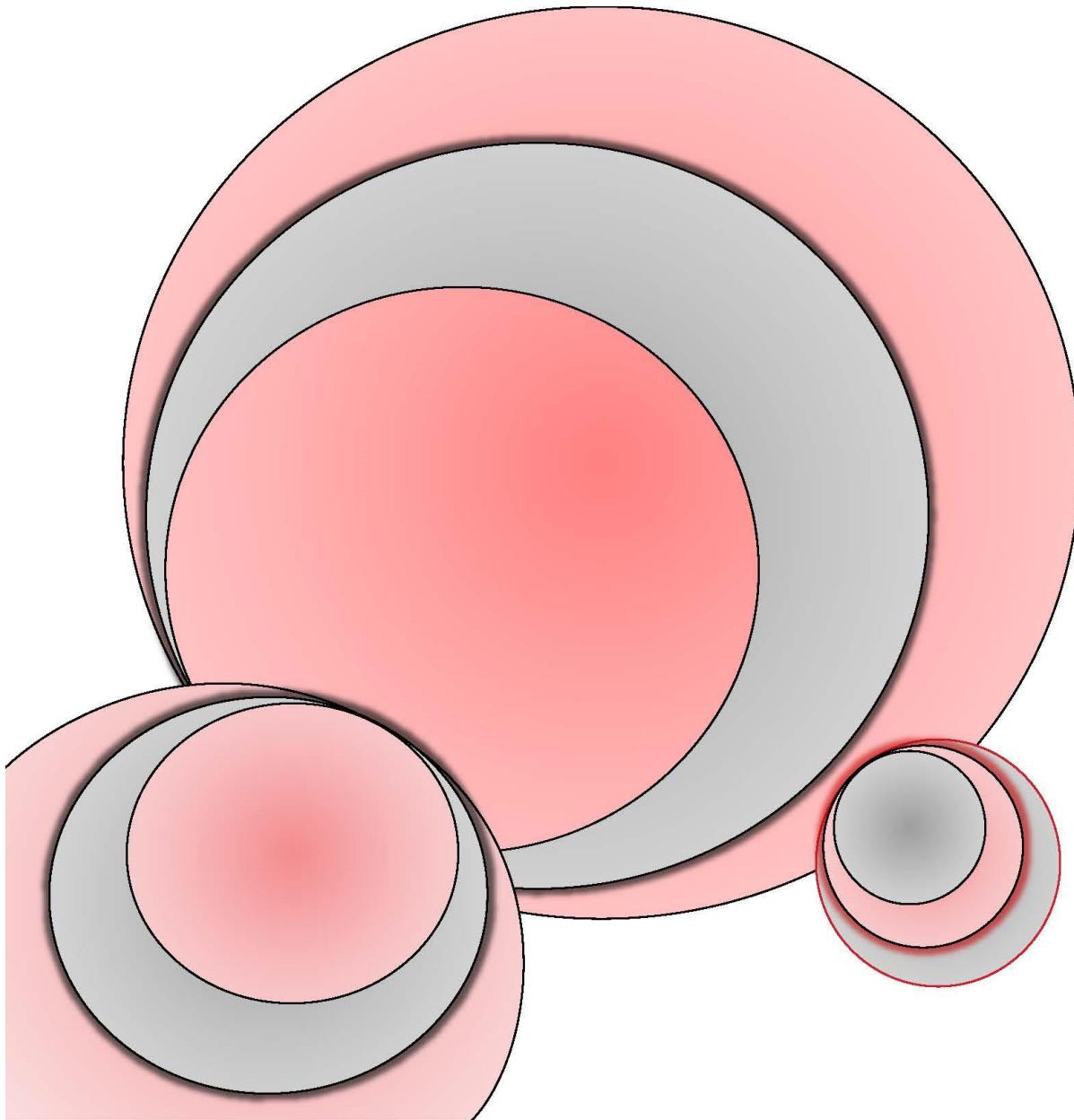




Number of Observation Sites by MSHP Troop

Appendix C

Methodology



Methodology

In 2004 the sampling method for the Commercial Motor Vehicle Safety Belt Observational Survey was developed. The 2004 through 2021 surveys are a continuation of that same protocol design, there has been no change in the overall sampling method.

The data and tables shown below are from the initial protocol design developed in 2004.

The specific number of observation sites from each MSHP Troop was computed by multiplying the Troop's percentages of the states CMV DVMT by the total number of observation sites. This information is depicted in Table 1.

Table 1
Percent of CMV DVMT by MSHP Troop
by Number of Observation Sites

MSHP TROOP	CMV DVMT Total	Percentage of Total CMV DVMT	Total Number of Observation Sites
Troop C	4,666,704	25.55%	63
Troop A	3,510,976	19.28%	47
Troop D	2,735,803	15.66%	39
Troop F	1,848,753	10.27%	27
Troop E	1,605,545	8.80%	22
Troop H	1,391,631	7.63%	19
Troop I	1,216,495	6.65%	17
Troop B	623,664	3.41%	9
Troop G	501,141	2.75%	7
Total	18,100,711	100%	250

Methodology

To identify the specific number of observation sites by roadway type for each Troop, the number of observations for each Troop was multiplied by the percentage of each roadway types CMV DVMT in that Troop. Tables 2-5 depicts the number of observation sites by Troop for freeway, expressway, two-lane, and other (Super 2 Lane, 5-Lane Section, 3-Lane Section, Multi-Lane, and One Way) roadway types.

Table 2
Percent of Observation Sites by MSHP Troop
by Freeway Roadway Type

MSHP TROOP	Total Number of Observation Sites	Total Number of Freeway CMV DVMT	Percent of Freeway CMV DVMT	Total Number of Freeway Sites
Troop A	47	1,938,788	55%	26
Troop B	9	3,171	0.005%	0
Troop C	63	3,207,418	69%	43
Troop D	39	1,288,821	47%	18
Troop E	22	919,341	57%	12
Troop F	27	956,412	52%	15
Troop G	7	0	0%	0
Troop H	19	945,203	68%	13
Troop I	17	957,154	79%	14
Total	250	10,216,308	100.00%	141

Table 3
Percent of Observation Sites by Troop
by Expressway Roadway Type

MSHP TROOP	Total Number of Observation Sites	Total Number of Expressway CMV DVMT	Percent of Expressway CMV DVMT	Total Number of Expressway Sites
Troop A	47	845,887	24%	11
Troop B	9	193,188	31%	3
Troop C	63	491,889	11%	7
Troop D	39	472,208	17%	7
Troop E	22	137,776	9%	2
Troop F	27	366,351	20%	5
Troop G	7	127,503	25%	2
Troop H	19	150,946	11%	2
Troop I	17	9,466	1%	0
Total	250	2,795,214	100.00%	39

Methodology

Table 4
Percent of Observation Sites by Troop
by Two-Lane Roadway Type

MSHP TROOP	Total Number of Observation Sites	Total Number of Two-Lane CMV DVMT	Percent of Two-Lane CMV DVMT	Total Number of Two-Lane Sites
Troop A	47	556,958	16%	8
Troop B	9	410,297	66%	6
Troop C	63	546,597	12%	8
Troop D	39	588,871	22%	9
Troop E	22	405,617	25%	6
Troop F	27	388,411	21%	6
Troop G	7	185,281	37%	2
Troop H	19	249,582	18%	3
Troop I	17	161,871	13%	2
Total	250	3,493,485	100.00%	50

Table 5
Percent of Observation Sites by Troop
by Other Roadway Type

MSHP TROOP	Total Number of Observation Sites	Total Number of Other CMV DVMT	Percent of Other CMV DVMT	Total Number of Other Sites
Troop A	47	169,344	5%	2
Troop B	9	17,007	3%	0
Troop C	63	420,800	9%	5
Troop D	39	385,902	14%	5
Troop E	22	142,809	8%	1
Troop F	27	137,580	7%	2
Troop G	7	188,357	38%	3
Troop H	19	45,900	3%	1
Troop I	17	88,004	7%	1
Total	250	1,595,703	100.00%	20

Methodology

The specific observation sites selected from each MSHP Troop were determined by reviewing a state map that showed the total number of CMV DVMT on each state system roadway. In addition, MSHP Troop maps color-coded by roadway type, i.e., freeway, expressway, two-lane, and other, were also used in the selection process. Observation sites for each Troop were selected based upon the highest descending order of CMV DVMT on each roadway for each roadway type. The number of observation sites by Troop, county, and roadway type is shown in Table 6.

Table 6
Observation Sites
by Troop, County and Roadway Type

County	Total # of Sites	Roadway Type			
		Freeway	Expressway	2 Lane	Other
Troop A					
Bates	2	0	2	0	0
Cass	3	0	3	0	0
Clay	7	7	0	0	0
Henry	2	0	1	1	0
Jackson	10	9	1	0	0
Johnson	2	0	1	1	0
Lafayette	7	3	3	0	1
Pettis	2	0	2	0	0
Platte	5	5	0	0	0
Ray	2	0	0	2	0
Saline	5	2	0	3	0
Total 11 Counties	47	26	13	7	1
Troop B					
Linn	3	0	1	2	0
Ralls	2	0	1	1	0
Randolph	3	0	1	2	0
Schuylerville	1	0	1	0	0
Total 4 Counties	9	0	4	5	0

Methodology

Table 6 (Continued)
Observation Sites by Troop, County and Roadway Type

County	Total # of Sites	Roadway Type			
		Freeway	Expressway	2 Lane	Other
Troop C					
Franklin	11	9	0	2	0
Jefferson	8	3	1	2	2
Lincoln	3	0	2	1	0
Perry	4	3	0	1	0
Pike	3	0	0	3	0
St. Charles	4	4	0	0	0
St. Francois	1	0	1	0	0
St. Louis	21	17	1	0	3
Ste. Genevieve	4	3	0	1	0
Warren	4	4	0	0	0
Total 10 Counties	63	43	5	10	5
Troop D					
Barry	1	0	0	1	0
Barton	1	0	1	0	0
Christian	3	1	1	0	1
Dallas	2	0	2	0	0
Greene	7	2	3	1	1
Jasper	4	2	2	0	0
Lawrence	6	2	1	2	1
McDonald	1	0	1	0	0
Newton	4	2	2	0	0
Polk	3	0	0	3	0
St. Clair	1	0	1	0	0
Taney	1	1	0	0	0
Vernon	1	1	0	0	0
Webster	4	2	1	1	0
Total 14 Counties	39	13	15	8	3

Methodology

Table 6 (Continued)
Observation Sites by Troop, County and Roadway Type

County	Total # of Sites	Roadway Type			
		Freeway	Expressway	2 Lane	Other
Troop E					
Bollinger	1	0	0	1	0
Butler	1	0	1	0	0
Cape Girardeau	4	2	0	2	0
Dunklin	1	0	0	1	0
Mississippi	2	2	0	0	0
New Madrid	3	3	0	0	0
Pemiscot	3	3	0	0	0
Scott	4	2	0	1	1
Stoddard	2	0	1	1	0
Total 9 Counties	21	12	2	6	1
Troop F					
Audrain	2	0	1	1	0
Boone	7	4	1	1	1
Callaway	5	4	1	0	0
Camden	1	0	1	0	0
Cole	4	3	0	1	0
Cooper	2	2	0	0	0
Gasconade	1	0	0	1	0
Miller	1	0	1	0	0
Moniteau	1	0	0	1	0
Montgomery	2	2	0	0	0
Osage	1	0	0	0	1
Total 11 Counties	27	15	5	5	2
Troop G					
Howell	3	0	1	1	1
Oregon	2	0	0	1	1
Texas	2	0	1	0	1
Total 3 Counties	7	0	2	2	3

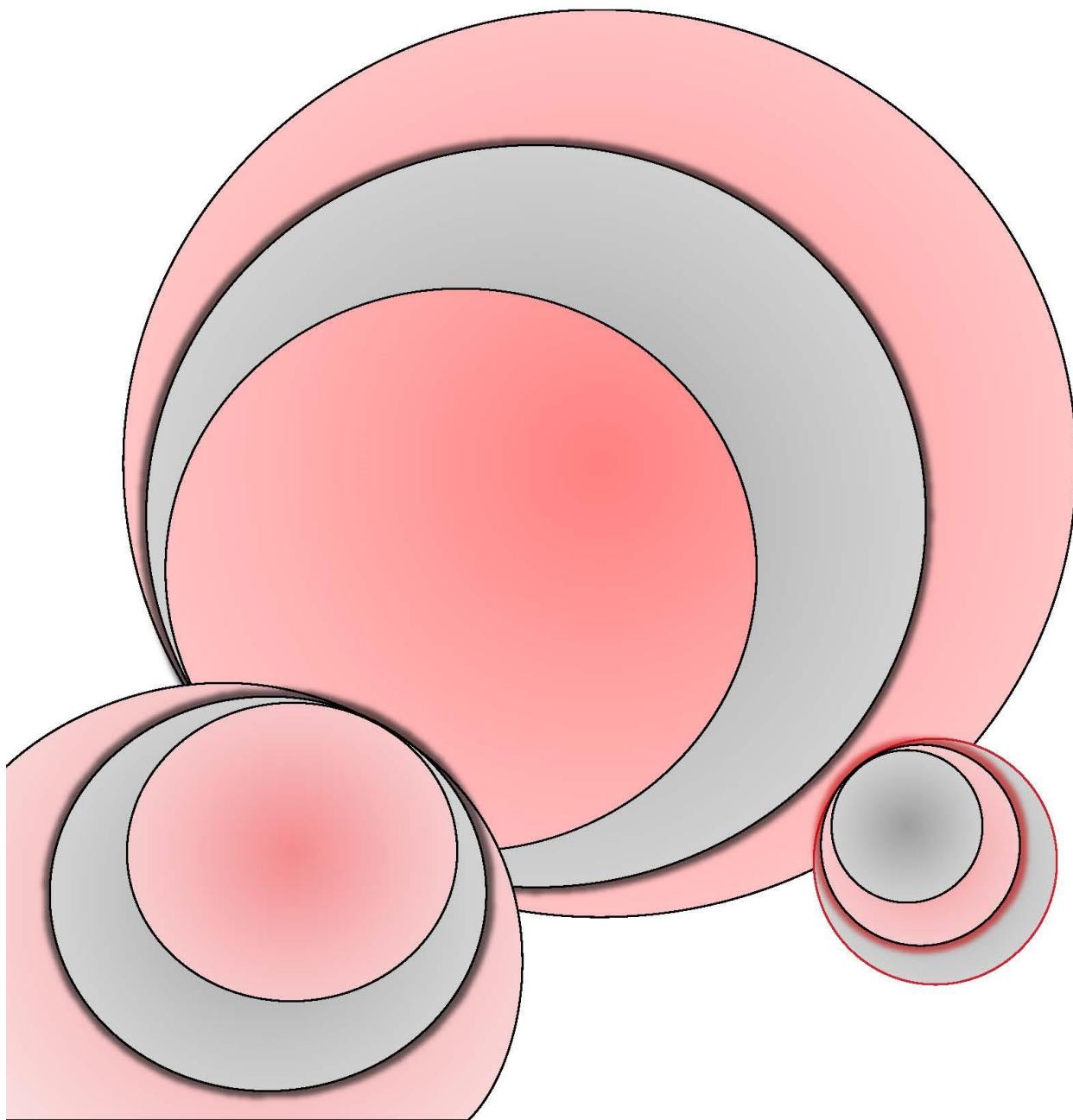
Methodology

Table 6 (Continued)
Observation Sites by Troop, County and Roadway Type

County	Total # of Sites	Roadway Type			
		Freeway	Expressway	2 Lane	Other
Troop H					
Andrew	1	0	1	0	0
Atchison	2	2	0	0	0
Buchanan	5	3	1	0	1
Clinton	2	2	0	0	0
Daviess	2	2	0	0	0
DeKalb	1	0	0	1	0
Gentry	1	0	0	1	0
Harrison	2	2	0	0	0
Holt	2	2	0	0	0
Nodaway	1	0	0	1	0
Total 10 Counties	19	13	2	3	1
Troop I					
Crawford	4	3	0	1	0
Laclede	6	4	0	1	1
Phelps	4	3	0	1	0
Pulaski	3	3	0	0	0
Total 4 Counties	17	13	0	3	1

Appendix D

CMV Driver Safety Belt Use Rate by MSHP Troop by County by Roadway Type



Appendix D shows the frequency of belted and non-belted commercial motor vehicle drivers and their corresponding safety belt usage rate for MSHP Troop by county and roadway type. Of the 250 observational sites, 85.9 percent were on Freeways, 9.0 percent were on Expressways, 3.0 percent were on Two-lane roadways, and 1.3 percent were on Other roadways

Troop A												
County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Bates	0	0	0	101	36	1	0	0	0	0	0	0
	0	0	0	73.2	26.1	0.7	0	0	0	0	0	0
Cass	0	0	0	187	34	0	0	0	0	0	0	0
	0	0	0	84.6	15.4	0	0	0	0	0	0	0
Clay	488	69	2	0	0	0	0	0	0	0	0	0
	87.3	12.3	0.4	0	0	0	0	0	0	0	0	0
Henry	0	0	0	2	2	0	5	1	2	0	0	0
	0	0	0	50.0	50.0	0	62.5	12.5	25.0	0	0	0
Jackson	669	238	15	32	16	0	0	0	0	0	0	0
	72.6	25.8	1.6	66.7	33.3	0	0	0	0	0	0	0
Johnson	0	0	0	2	1	0	0	0	0	0	0	0
	0	0	0	66.7	33.3	0	0	0	0	0	0	0
Lafayette	227	67	3	16	5	1	0	0	0	3	0	0
	76.4	22.6	1.0	72.7	22.7	4.6	0	0	0	100.0	0	0
Pettis	0	0	0	4	1	0	0	0	0	0	0	0
	0	0	0	80.0	20.0	0	0	0	0	0	0	0
Platte	297	50	1	0	0	0	0	0	0	0	0	0
	85.3	14.4	0.3	0	0	0	0	0	0	0	0	0
Ray	0	0	0	0	0	0	17	4	1	0	0	0
	0	0	0	0	0	0	77.3	18.2	4.5	0	0	0
Saline	253	64	2	0	0	0	32	16	2	0	0	0
	79.3	20.1	0.6	0	0	0	64.0	32.0	4.0	0	0	0

Troop B												
County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Linn	0	0	0	47	26	1	4	10	0	0	0	0
	0	0	0	63.5	35.1	1.4	28.6	71.4	0	0	0	0
Ralls	0	0	0	65	6	0	72	4	1	0	0	0
	0	0	0	91.5	8.5	0	93.5	5.2	1.3	0	0	0
Randolph	0	0	0	20	4	0	23	16	0	0	0	0
	0	0	0	83.3	16.7	0	59.0	41.0	0	0	0	0
Schuyler	0	0	0	90	1	0	0	0	0	0	0	0
	0	0	0	90.0	10.0	0	0	0	0	0	0	0

Troop C

County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Franklin	1,669	190	3	0	0	0	7	1	3	0	0	0
	89.6	10.2	0.2	0	0	0	63.6	9.1	27.3	0	0	0
Jefferson	418	82	0	10	5	0	11	3	0	21	4	0
	83.6	16.4	0	66.7	33.3	0	78.6	21.4	0	84.0	16.0	0
Lincoln	0	0	0	145	18	1	11	4	0	0	0	0
	0	0	0	88.4	11.0	0.6	73.3	26.7	0	0	0	0
Perry	316	34	4	0	0	0	18	8	0	0	0	0
	89.3	9.6	1.1	0	0	0	69.2	30.8	0	0	0	0
Pike	0	0	0	0	0	0	122	7	0	0	0	0
	0	0	0	0	0	0	94.6	5.4	0	0	0	0
St. Charles	567	35	0	0	0	0	0	0	0	0	0	0
	94.2	5.8	0	0	0	0	0	0	0	0	0	0
St. Francois	0	0	0	60	15	0	0	0	0	0	0	0
	0	0	0	80.0	20.0	0	0	0	0	0	0	0
St. Louis	2,164	289	5	18	7	0	0	0	0	61	10	1
	88.0	11.8	0.2	72.0	28.0	0	0	0	0	84.7	13.9	1.4
St. Genevieve	258	20	0	0	0	0	13	5	0	0	0	0
	92.8	7.2	0	0	0	0	72.2	27.8	0	0	0	0
Warren	678	35	1	0	0	0	0	0	0	0	0	0
	95.0	4.9	0.1	0	0	0	0	0	0	0	0	0

Troop D

County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Barry	0	0	0	0	0	0	25	6	1	0	0	0
	0	0	0	0	0	0	78.1	18.8	3.1	0	0	0
Barton	0	0	0	48	2	0	0	0	0	0	0	0
	0	0	0	96.0	4.0	0	0	0	0	0	0	0
Christian	49	10	1	45	5	3	0	0	0	6	1	1
	81.7	16.7	1.6	84.9	9.4	5.7	0	0	0	75.0	12.5	12.5
Dallas	0	0	0	39	17	0	0	0	0	0	0	0
	0	0	0	69.6	30.4	0	0	0	0	0	0	0
Greene	320	25	3	136	35	2	20	5	0	2	0	6
	92.0	7.2	0.8	78.6	20.2	1.2	80.0	20.0	0	25.0	0	75.0
Jasper	258	16	1	69	4	2	0	0	0	0	0	0
	93.8	5.8	0.4	92.0	5.3	2.7	0	0	0	0	0	0
Lawrence	385	12	4	6	2	0	7	7	1	13	7	0
	96.0	3.0	1.0	75.0	25.0	0	46.7	46.7	6.6	65.0	35.0	0
McDonald	0	0	0	58	2	1	0	0	0	0	0	0
	0	0	0	95.1	3.3	1.6	0	0	0	0	0	0
Newton	477	5	4	130	8	3	0	0	0	0	0	0
	98.2	1.0	0.8	92.2	5.7	2.1	0	0	0	0	0	0
Polk	0	0	0	0	0	0	97	24	1	0	0	0
	0	0	0	0	0	0	79.5	19.7	0.8	0	0	0
St. Clair	0	0	0	5	2	0	0	0	0	0	0	0
	0	0	0	71.4	28.6	0	0	0	0	0	0	0
Taney	4	2	2	0	0	0	0	0	0	0	0	0
	50.0	25.0	25.0	0	0	0	0	0	0	0	0	0
Vernon	35	2	0	0	0	0	0	0	0	0	0	0
	94.6	5.4	0	0	0	0	0	0	0	0	0	0
Webster	129	34	0	19	4	0	2	0	0	0	0	0
	79.1	20.9	0	82.6	17.4	0	100.0	0	0	0	0	0

Troop E

County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Bollinger	0	0	0	0	0	0	14	3	0	0	0	0
	0	0	0	0	0	0	82.4	17.6	0	0	0	0
Butler	0	0	0	33	5	0	0	0	0	0	0	0
	0	0	0	86.8	13.2	0	0	0	0	0	0	0
Cape Girardeau	222	33	1	0	0	0	17	3	1	0	0	0
	86.7	12.9	0.4	0	0	0	81.0	14.3	4.7	0	0	0
Dunklin	0	0	0	0	0	0	16	4	0	0	0	0
	0	0	0	0	0	0	80.0	20.0	0	0	0	0
Mississippi	237	36	1	0	0	0	0	0	0	0	0	0
	86.5	13.1	0.4	0	0	0	0	0	0	0	0	0
New Madrid	452	73	1	0	0	0	0	0	0	0	0	0
	85.9	13.9	0.2	0	0	0	0	0	0	0	0	0
Pemiscot	436	74	3	0	0	0	0	0	0	0	0	0
	85.0	14.4	0.6	0	0	0	0	0	0	0	0	0
Scott	213	34	2	0	0	0	7	1	0	20	5	0
	85.5	13.7	0.8	0	0	0	87.5	12.5	0	80.0	20.0	0
Stoddard	0	0	0	17	2	0	14	1	0	0	0	0
	0	0	0	89.%	10.5	0	93.3	6.7	0	0	0	0

Troop F

County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Audrain	0	0	0	10	10	3	11	8	0	0	0	0
	0	0	0	43.5	43.5	13.0	57.9	42.1	0	0	0	0
Boone	552	46	1	26	10	2	0	2	0	8	3	0
	92.1	7.7	0.2	68.4	26.3	5.3	0	100.0	0	72.7	27.3	0
Callaway	552	19	0	35	6	0	0	0	0	0	0	0
	96.7	3.3	0	85.4	14.6	0	0	0	0	0	0	0
Camden	0	0	0	17	8	0	0	0	0	0	0	0
	0	0	0	68.0	32.0	0	0	0	0	0	0	0
Cole	110	8	2	0	0	0	1	1	0	0	0	0
	91.7	6.7	1.6	0	0	0	50.0	50.0	0	0	0	0
Cooper	266	32	4	0	0	0	0	0	0	0	0	0
	88.1	10.6	1.3	0	0	0	0	0	0	0	0	0
Gasconade	0	0	0	0	0	0	11	1	0	0	0	0
	0	0	0	0	0	0	91.7	8.3	0	0	0	0
Miller	0	0	0	42	1	1	0	0	0	0	0	0
	0	0	0	95.4	2.3	2.3	0	0	0	0	0	0
Moniteau	0	0	0	0	0	0	5	4	0	0	0	0
	0	0	0	0	0	0	55.6	44.4	0	0	0	0
Montgomery	163	24	0	0	0	0	0	0	0	0	0	0
	87.2	12.8	0	0	0	0	0	0	0	0	0	0
Osage	0	0	0	0	0	0	0	0	0	22	1	0
	0	0	0	0	0	0	0	0	0	95.6	4.4	0

Troop G

County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Howell	0	0	0	33	4	0	3	3	0	24	0	0
	0	0	0	89.2	10.8	0	50.0	50.0	0	100.0	0	0
Oregon	0	0	0	0	0	0	2	1	0	2	2	0
	0	0	0	0	0	0	66.7	33.3	0	50.0	50.0	0
Texas	0	0	0	34	2	2	0	0	0	15	5	3
	0	0	0	89.4	5.3	5.3	0	0	0	65.2	21.7	13.1

Troop H

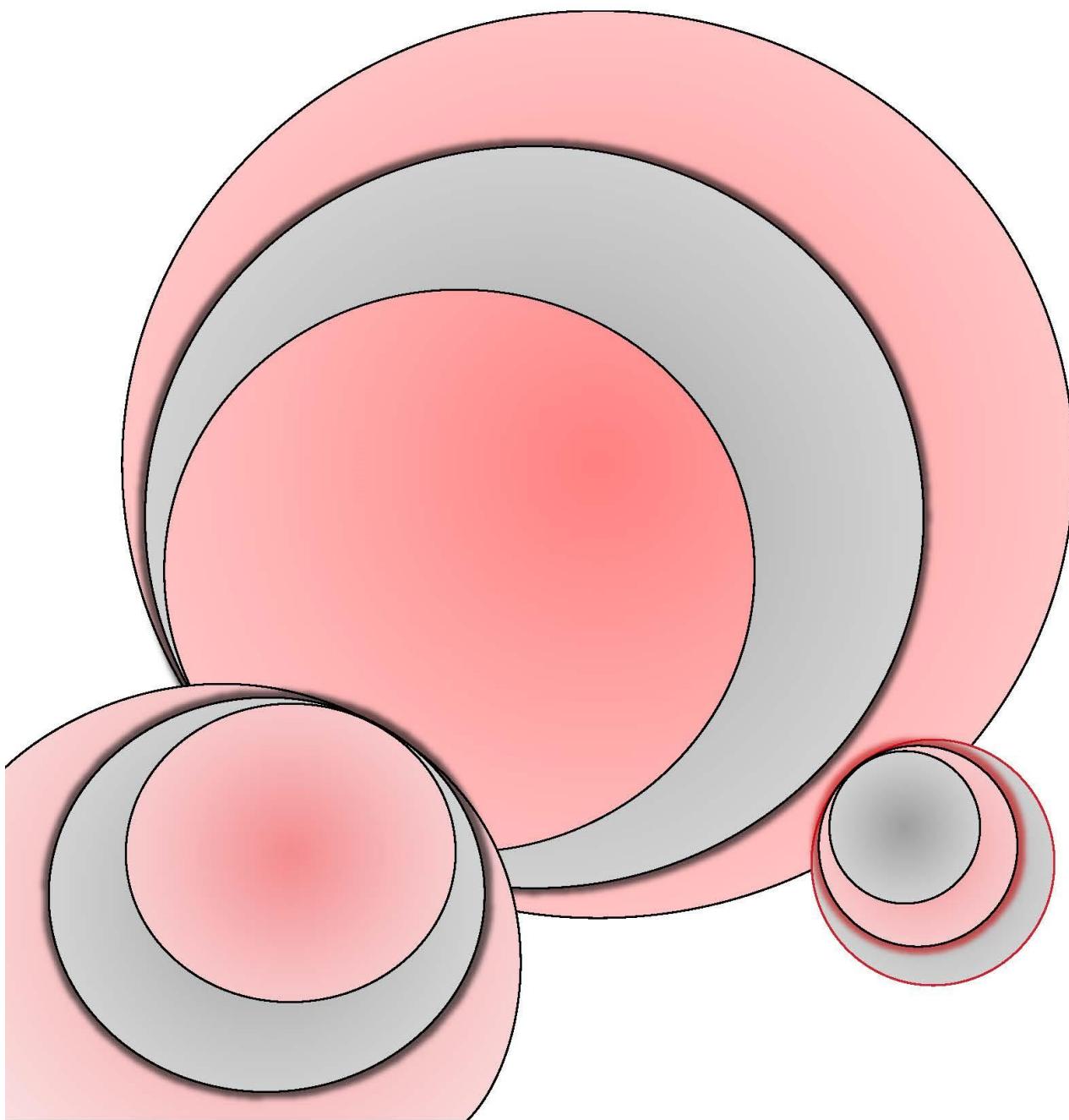
County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Andrew	0	0	0	17	2	0	0	0	0	0	0	0
	0	0	0	89.5	10.5	0	0	0	0	0	0	0
Atchison	136	46	0	0	0	0	0	0	0	0	0	0
	74.7	25.3	0	0	0	0	0	0	0	0	0	0
Buchanan	315	29	2	30	6	0	0	0	0	12	7	0
	91.0	8.4	0.6	83.3	16.7	0	0	0	0	63.2	36.8	0
Clinton	294	33	4	0	0	0	0	0	0	0	0	0
	88.8	10.0	1.2	0	0	0	0	0	0	0	0	0
Daviess	172	9	0	0	0	0	0	0	0	0	0	0
	95.0	5.0	0	0	0	0	0	0	0	0	0	0
DeKalb	0	0	0	0	0	0	1	1	0	0	0	0
	0	0	0	0	0	0	50.0	50.0	0	0	0	0
Gentry	0	0	0	0	0	0	2	0	0	0	0	0
	0	0	0	0	0	0	100.0	0	0	0	0	0
Harrison	137	15	1	0	0	0	0	0	0	0	0	0
	89.5	9.8	0.7	0	0	0	0	0	0	0	0	0
Holt	144	29	0	0	0	0	0	0	0	0	0	0
	83.2	16.8	0	0	0	0	0	0	0	0	0	0
Nodaway	0	0	0	0	0	0	9	4	1	0	0	0
	0	0	0	0	0	0	64.3	28.6	7.1	0	0	0

Troop I

County Freq. Percent	Freeway			Expressway			Two-Lane			Other		
	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known	Belted	Non-Belted	Un-known
Crawford	457	33	2	0	0	0	20	3	0	0	0	0
	92.9	6.7	0.4	0	0	0	87.0	13.0	0	0	0	0
Laclede	582	36	4	0	0	0	0	1	0	9	0	0
	93.6	5.8	0.6	0	0	0	0	100.0	0	100.0	0	0
Phelps	440	17	4	0	0	0	5	0	3	0	0	0
	95.4	3.7	0.9	0	0	0	62.5	0	37.5	0	0	0
Pulaski	528	33	0	0	0	0	0	0	0	0	0	0
	94.1	5.9	0	0	0	0	0	0	0	0	0	0

Appendix E

CMV Driver Safety Belt Use Rate by MSHP Troop by County by Year



Results from Missouri's first CMV survey through 2021 are included within this appendix. The following tables show the results of observations from 2004 through 2021, by MSHP Troop by County by Year.

Commercial Vehicle Drivers Safety Belt Usage Rate By MSHP Troop by County by Year

Troop A										
County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Bates	31 46.3	42 55.3	46 61.3	72 69.2	63 75.9	93 83.0	122 80.3	74 62.2	188 93.1	101 73.2
Cass	81 72.3	82 56.5	119 76.8	115 73.7	110 76.4	128 83.1	226 93.0	135 56.3	293 88.0	187 84.6
Clay	494 50.8	472 61.2	415 58.7	505 66.7	498 71.2	532 71.3	735 81.5	338 65.1	626 80.2	488 87.3
Henry	35 62.5	22 84.6	23 76.7	26 70.3	33 86.8	34 85.0	22 88.0	25 96.2	34 91.9	7 58.3
Jackson	355 52.7	337 52.7	446 65.0	523 61.1	696 68.7	887 85.1	936 83.5	652 66.1	1,149 93.6	701 72.3
Johnson	28 63.6	6 66.7	9 60.0	20 80.0	25 78.1	17 58.6	15 83.3	8 88.9	16 72.7	2 66.7
Lafayette	268 73.6	185 78.7	292 81.6	350 69.2	533 79.3	549 87.4	352 93.1	294 89.6	564 92.0	246 76.4
Pettis	28 59.6	9 90.0	18 85.7	14 60.9	26 86.7	26 78.8	14 87.5	9 81.8	19 90.5	4 80.0
Platte	159 43.0	177 42.7	246 52.1	514 50.5	320 55.7	375 62.0	418 77.1	252 56.9	409 70.0	297 85.3
Ray	11 61.1	9 47.4	15 51.7	7 43.8	16 50.0	16 57.1	26 83.9	14 82.4	30 83.3	17 77.3
Saline	217 66.6	242 87.4	347 84.8	318 75.5	455 84.4	478 86.6	329 88.7	308 93.3	357 90.4	285 77.2

Troop B										
County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Linn	40 52.6	23 52.3	29 82.9	28 82.4	32 82.1	44 84.6	21 60.0	32 68.1	51 63.8	51 58.0
Ralls	44 68.8	62 64.6	38 67.9	61 76.3	62 64.8	98 81.7	111 83.5	85 76.6	91 72.2	137 92.6
Randolph	44 58.7	44 60.3	36 63.2	56 78.9	48 85.7	55 77.5	51 57.1	43 56.6	52 74.3	43 68.3
Schuylerville	4 66.7	3 50.0	2 40.0	1 50.0	5 55.6	2 50.0	13 81.3	0 0.0	7 87.5	9 90.0

Troop C

County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Franklin	183	254	311	938	1,134	747	825	1,216	781	1,676
	71.6	66.2	55.8	66.5	76.4	85.2	80.3	93.8	82.2	89.5
Jefferson	176	148	257	482	699	253	380	402	279	460
	50.3	69.8	64.1	77.9	70.3	72.5	92.7	79.6	77.1	83.0
Lincoln	65	70	80	236	112	247	124	104	91	156
	54.6	57.9	55.6	71.1	66.3	80.5	87.3	73.8	86.7	87.2
Perry	148	197	236	255	285	282	328	377	344	334
	44.2	75.5	79.2	83.1	95.3	93.1	80.8	92.6	92.5	87.9
Pike	81	91	112	288	51	116	106	71	74	122
	45.8	47.6	57.1	72.2	73.9	81.7	91.4	76.3	85.1	94.6
St. Charles	222	232	390	550	404	834	342	591	547	567
	60.7	52.1	65.6	63.9	64.0	87.0	68.7	74.7	87.1	94.2
St. Francois	15	19	29	50	48	35	63	42	57	60
	32.6	51.4	64.4	84.8	87.3	87.5	84.0	80.8	78.1	80.0
St. Louis	984	1,194	1,478	2,616	3,571	1,972	1,044	1,766	1,502	2,243
	47.3	69.7	63.0	65.5	75.0	83.0	74.2	82.4	79.8	87.8
Ste. Genevieve	190	212	224	232	304	225	331	291	279	271
	58.3	77.7	73.2	87.2	95.6	87.9	86.2	86.4	84.8	91.6
Warren	151	182	183	419	240	621	410	410	339	678
	75.9	80.5	64.7	73.6	63.2	87.6	89.9	75.4	85.2	95.0

Troop D

County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Barry	13	1	17	13	16	17	10	6	11	25
	52.0	63.3	48.6	68.4	51.6	89.5	66.7	42.9	68.8	78.1
Barton	20	32	28	20	12	42	33	23	44	48
	87.0	91.4	93.3	74.1	75.0	100.0	89.2	63.9	84.6	96.0
Christian	42	34	31	81	54	45	128	58	100	100
	56.0	42.0	38.8	75.7	67.5	64.3	92.8	58.0	89.3	82.6
Dallas	20	38	102	24	32	46	58	28	20	39
	66.7	63.3	85.0	46.2	57.1	79.3	68.2	51.9	40.0	69.6
Greene	287	258	255	335	282	285	439	334	339	478
	65.5	56.6	52.2	72.4	64.7	71.3	88.3	70.9	82.7	86.3
Jasper	180	246	268	143	136	192	201	189	236	327
	88.7	91.5	91.8	80.3	78.6	83.8	81.4	72.1	90.1	93.4
Lawrence	178	182	189	184	169	183	248	245	254	411
	82.8	86.3	87.1	87.6	84.5	87.1	80.8	73.1	79.4	92.57
McDonald	15	25	36	29	36	27	26	36	36	58
	79.0	83.3	97.3	96.7	85.7	90.0	81.3	83.7	83.7	95.1
Newton	243	203	213	229	241	213	257	299	363	607
	85.0	83.8	87.3	89.8	91.6	97.7	79.1	77.9	87.5	96.8
Polk	54	71	72	76	57	71	91	110	139	97
	52.4	73.2	64.9	71.1	60.0	78.0	81.3	91.7	95.2	79.5
St. Clair	3	2	3	7	1	7	12	10	3	5
	37.5	33.3	37.5	35.0	20.0	63.6	80.0	83.3	60.0	71.4
Taney	2	7	1	2	2	4	5	4	3	4
	50.0	77.8	14.3	66.7	33.3	50.0	62.5	80.0	42.9	50.0
Vernon	23	27	22	17	16	12	27	26	32	35
	92.0	100.0	84.6	73.9	84.2	80.0	87.1	74.3	86.5	94.6
Webster	186	165	200	203	350	329	257	194	257	150
	61.0	67.9	71.4	71.7	87.1	86.8	84.5	71.6	84.3	79.8

Troop E

County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Bollinger	7 31.8	4 33.3	9 52.9	9 50.0	8 57.1	10 62.5	12 63.2	11 78.6	10 76.9	14 82.4
Butler	18 36.0	13 28.3	13 36.1	20 45.5	22 53.7	22 56.4	26 59.1	25 67.6	32 76.2	33 86.8
Cape Girardeau	124 49.8	106 47.3	119 60.1	143 56.5	181 68.8	155 68.3	180 74.7	190 78.8	196 82.7	239 86.3
Dunklin	7 36.8	4 28.6	2 28.6	3 27.3	1 14.3	5 62.5	7 58.3	7 63.6	7 77.8	16 80.0
Mississippi	105 54.7	111 56.9	122 64.2	116 63.0	140 71.8	150 75.8	150 77.3	172 79.6	171 83.4	237 86.5
New Madrid	183 49.9	205 56.6	217 60.3	222 62.0	240 69.0	273 72.4	265 73.4	299 78.3	319 83.5	452 85.9
Pemiscot	193 55.6	199 57.9	209 57.3	233 63.0	288 73.1	286 77.1	287 75.3	328 82.4	339 86.3	436 85.0
Scott	121 44.5	119 44.7	148 55.9	165 57.7	156 63.2	171 69.0	194 78.5	205 78.5	209 80.7	240 85.1
Stoddard	15 27.8	14 31.8	15 41.7	23 51.1	15 51.7	20 62.5	24 63.2	23 71.9	21 77.8	31 91.2

Troop F

County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Audrain	18 37.5	24 52.2	18 41.9	21 46.7	18 69.2	29 56.9	27 69.2	14 30.4	16 53.3	21 50.0
Boone	519 80.4	445 85.4	348 85.7	451 80.5	333 74.3	500 83.9	541 94.9	490 88.9	539 88.8	586 90.2
Callaway	397 63.5	215 69.4	222 71.2	385 70.0	460 67.9	472 67.9	487 88.2	391 89.1	551 94.4	587 95.92
Camden	13 28.9	22 38.6	39 52.7	22 34.4	22 50.0	1 60.0	23 74.2	15 60.0	14 87.5	17 68.0
Cole	52 41.9	70 59.3	67 55.8	81 60.9	83 73.5	67 69.8	81 77.1	97 82.2	88 92.6	111 91.0
Cooper	261 92.2	167 86.5	140 94.6	15 77.5	224 75.7	207 83.5	204 96.2	272 89.8	282 87.3	266 88.08
Gasconade	3 60.0	3 50.0	6 60.0	2 25.0	6 66.7	15 88.2	6 60.0	3 25.0	8 88.9	11 91.7
Miller	8 25.0	17 65.4	13 34.2	8 47.1	27 77.1	17 77.3	27 93.1	31 88.6	24 88.9	42 95.5
Moniteau	5 62.5	6 54.6	8 80.0	3 23.1	8 61.5	9 75.0	4 80.0	9 56.3	7 70.0	5 55.6
Montgomery	174 90.2	87 74.4	86 91.5	141 83.9	180 66.9	184 88.0	212 96.8	213 97.7	235 92.2	163 87.2
Osage	9 64.3	5 27.8	14 66.7	7 58.3	12 57.1	17 81.0	11 84.6	9 56.3	10 71.4	22 95.7

Troop G										
County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Howell	31 53.6	40 75.5	60 57.1	129 69.7	102 77.3	85 81.7	57 58.2	36 58.1	44 59.5	60 89.6
Oregon	19 76.0	33 71.7	29 55.8	11 55.0	87 79.1	22 73.3	9 56.3	8 80.0	6 60.0	4 57.1
Texas	28 60.9	50 75.8	72 70.6	117 74.5	114 82.0	38 79.2	75 67.8	64 79.0	72 81.8	49 80.3

Troop H										
County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Andrew	4 17.4	13 50.0	15 51.7	15 51.7	8 36.4	11 44.0	13 59.1	13 65.0	22 78.6	17 89.5
Atchison	85 51.8	72 60.5	121 72.9	90 62.9	64 54.7	123 68.3	92 68.2	139 67.8	92 78.6	136 74.7
Buchanan	234 66.3	235 58.5	235 60.4	284 65.4	195 58.0	205 64.3	248 72.5	339 79.0	403 89.4	357 89.0
Clinton	153 71.8	128 59.3	138 56.8	106 71.1	113 64.9	136 69.4	164 84.1	182 78.5	236 89.4	294 88.8
Daviess	45 51.1	60 50.4	113 76.4	106 62.4	95 71.4	61 57.0	101 78.9	80 72.7	157 84.4	172 95.0
DeKalb	0 0.0	4 66.7	3 75.0	1 20.0	0 0.0	1 50.0	1 50.0	3 60.0	3 60.0	1 50.0
Gentry	1 50.0	1 50.0	1 50.0	1 16.7	1 33.3	6 54.6	7 50.0	2 50.0	3 42.9	2 100.0
Harrison	45 67.2	39 45.9	87 71.3	79 56.8	56 62.2	61 58.7	87 75.0	56 70.9	102 81.0	137 89.5
Holt	85 48.9	53 61.6	84 62.7	60 53.6	70 70.0	107 64.1	122 70.1	135 69.6	110 79.7	144 83.2
Nodaway	4 26.7	8 47.1	7 35.0	3 27.3	6 40.0	9 52.9	14 73.7	13 65.0	15 79.0	9 64.3

Troop I										
County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Crawford	180 62.5	229 72.7	250 72.7	247 63.3	414 82.3	359 93.3	299 77.7	234 79.1	339 96.9	477 92.6
Laclede	260 60.1	357 77.6	244 47.6	552 72.8	482 66.0	464 90.6	361 75.1	331 72.3	547 96.0	591 93.5
Phelps	189 55.4	239 76.1	197 64.2	222 55.1	309 80.1	359 86.7	200 71.4	301 87.5	456 96.0	445 94.9
Pulaski	165 60.9	210 74.7	197 67.9	329 68.5	451 88.6	407 92.9	304 71.9	286 77.3	443 95.3	528 94.1

Historical Totals by Troop by Year

County Freq. Percent	Belted 2004	Belted 2005	Belted 2006	Belted 2007	Belted 2008	Belted 2010	Belted 2012	Belted 2014	Belted 2016	Belted 2021
Troop A	1,707 56.0	1,583 60.4	1,976 66.8	2,464 62.9	2,775 72.0	3,135 79.0	3,195 84.1	2,109 69.6	3,685 86.7	2,335 78.7
Troop B	132 59.7	132 60.3	105 68.7	146 78.1	147 73.5	199 80.6	196 75.4	160 68.1	201 70.8	240 77.7
Troop C	2,215 52.1	2,599 67.3	3,300 63.8	6,066 68.8	6,848 74.7	5,332 84.4	3,953 80.3	5,270 83.5	4,293 82.8	6,567 89.3
Troop D	1,266 72.0	1,309 72.9	1,437 72.7	1,364 76.8	1,404 77.0	1,473 82.8	1,792 83.2	1,562 72.9	1,837 84.3	2,384 89.7
Troop E	773 49.2	775 51.4	854 57.9	934 59.5	1,051 68.3	1,092 72.0	1,145 74.5	1,260 79.2	1,304 83.2	1,698 85.7
Troop F	1,459 72.1	1,061 74.6	961 75.3	1,276 72.1	1,373 70.3	1,529 77.0	1,623 90.9	1,544 86.8	1,774 90.1	1,831 90.3
Troop G	78 60.5	123 74.6	161 62.2	257 71.0	303 79.5	145 79.7	141 62.7	108 70.6	122 70.9	113 83.7
Troop H	656 59.4	613 56.9	804 64.0	745 62.2	608 61.4	720 63.8	849 74.0	962 74.1	1,143 85.2	1,269 87.0
Troop I	794 59.6	1,035 75.6	888 61.1	1,350 66.5	1,656 77.8	1,589 90.9	1,164 74.2	1,152 78.5	1,785 96.0	2,041 93.8
Total 76 Counties	9,080 58.8	9,230 65.7	10,486 65.6	14,602 67.5	16,165 73.4	15,214 80.6	14,548 81.5	15,213 81.0	14,568 82.8	18,478 87.7